### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

#### (19) World Intellectual Property Organization

International Bureau



## T CHRIST BENEFITE DE BENEFITE BENEFITE BENEFITE DE LE BENEFITE BENEFITE BENEFITE BENEFITE BENEFITE BENEFITE BE

(43) International Publication Date 17 June 2004 (17.06.2004)

**PCT** 

# (10) International Publication Number WO 2004/051563 A2

(51) International Patent Classification7:

G06T

(21) International Application Number:

PCT/IB2003/005391

(22) International Filing Date:

25 November 2003 (25.11.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 102 56 284.9

3 December 2002 (03.12.2002) Di

- (71) Applicant (for DE only): PHILIPS INTELLECTUAL PROPERTY & STANDARDS GMBH [DE/DE]; Steindamm 94, 20099 Hamburg (DE).
- (71) Applicant (for all designated States except DE, US): KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): LORENZ, Cristian [DE/DE]; c/o Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).

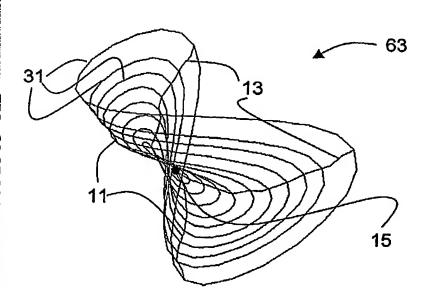
- (74) Agent: MEYER, Michael; Philips Intellectual Property & Standards GmbH, Weisshausstr. 2, 52066 Aachen (DE).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF DEFINING A SURFACE OR A VOLUME



(57) Abstract: The invention relates to a method of defining a surface or a volume in a three-dimensional, and in particular medical, data set. At least two starting lines (11, 13), which preferably lie in mutually perpendicular planes and intersect one another, having been preset, contour lines (31) that lie between the starting lines (11, 13) are determined by Fourier transformation. These contour lines (31) form a surface structure (63) from which a surface can be determined by polygonization, e.g. by triangulation. If the starting lines are closed, the surface too is closed and defines a volume.